

Functional Area 5.3

FAMILY HOUSING MAINTENANCE

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List of Technical Exhibits

<u>Exhibit Number</u>	<u>Title</u>
5.3-001	Scheduled Tasks

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Functional Area 5.3

FAMILY HOUSING MAINTENANCE

5.3.1 INTRODUCTION

The Contractor shall provide maintenance services and repairs for military family housing.

There are 1320 family housing units at Fort Lee. The Contractor shall perform services, including family housing change of occupancy maintenance, preventive maintenance, cyclic maintenance, repairs, and other services as required herein. All work shall be performed by qualified personnel in accordance with applicable laws, regulations, and Government-developed annual and long-range plans. Technical Exhibits provide expanded information for this Functional Area.

5.3.2 SCOPE OF SERVICES

5.3.2.1 Work Area/System Description

Family Housing Maintenance areas covered under this Contract include, but are not limited to, the following:

- Change of Occupancy Maintenance and Repair of Family Housing Units
- Preventive Maintenance and Repair of Family Housing Units
- Cyclic Maintenance and Repair of Family Housing Units
- Maintenance and Repair of General Flag Officer's Quarters (GFOQ)

The inventory of family housing units covered under this Contract can be found in Technical Exhibit 1-004. Location of family housing units are detailed on maps in Technical Exhibit 1-003.

5.3.2.2 Work Management and Control

5.3.2.2.1 Publications and Forms. Specific publications and forms required for the accomplishment of work described in this Functional Area are listed in Section C-6.

5.3.2.2.2 Work Hours. The Contractor shall perform maintenance of the family housing units during normal Installation working hours. For situations where the resident is unavailable during normal working hours, the Contractor may respond to after-hours calls for routine or preventive maintenance work when coordinated with the resident for access. The Contractor shall gain access to family housing units to perform maintenance only if a resident 18 years or older is present. For all work performed at the General Flag Officer's Quarters, the Contractor shall schedule with the General or the General's Aide to obtain access.

5.3.3 SCHEDULED TASKS

The Contractor shall perform the tasks described below on a recurring or scheduled basis and record the work under approved Standing Operating Orders (SOOs). The Contractor shall make any repairs beyond the scope of Preventive and Cyclic Maintenance with an

approved Service Order (SO) or Individual Job (IJO). Scheduled task frequencies that apply to this Functional Area are presented in Technical Exhibit 5.3-001.

5.3.3.1 Preventive Maintenance Services

The Contractor shall perform preventive maintenance services on family housing units and equipment. After the preventive maintenance, the Contractor shall tag or label all serviced equipment. Tags shall indicate inspection date, maintenance performed, and the inspector's signature.

5.3.3.1.1 Heating and Cooling. Services on heating, ventilating, and air conditioning (HVAC) equipment shall be performed, along with an inspection, prior to both the heating and the air-conditioning seasons each year. The Contractor shall ensure that heating and cooling systems operate at design capacity and are free from defects that could affect continued safe and efficient operation.

5.3.3.1.1.1 Cleaning and Operational Check. The Contractor shall clean and properly adjust fans, belts, filters, coils, and burners, and shall replace batteries and belts as required. The Contractor shall adjust, lubricate, and calibrate thermostats, controls, and control devices and ensure that they function properly. The Contractor shall ensure that duct insulation is free from cuts or tears and that ducts, dampers, and diffusers are free from leaks and obstructions. The Contractor shall ensure that wiring insulation has no breaks, that all connections are tight, and that motors draw the correct amperage. The Contractor shall ensure that piping is free from leaks and properly insulated. The Contractor shall ensure that all safety devices are free from defects and in operating condition. All furnace plenums shall be maintained free from corrosion and disfiguring damage..

5.3.3.1.1.2 Air Filter Replacement. The Contractor shall replace air filters in heating and cooling systems in each family housing unit every six months.

5.3.3.1.2 Hot Water Heaters. On an annual basis, the Contractor shall: check tanks and piping for water leaks; check for fuel system leaks; adjust the pilot fire on oil burners; check the pilot on oil/gas burners and adjust as required; check oil/gas burners for proper flame and adjust if required; check the operation and condition of relief valves; check automatic controls (temperature regulators, thermostatic devices, automatic fuel shut-off valves, etc.) for proper operation; check draft diverters and clear openings if clogged for gas burners; check fuel strainer elements on oil burners; check fuel level in tanks; check tank fill pipes and fuel lines and connections for damage; inspect, clean, and adjust electrodes and nozzles on oil burners; inspect fire box and flame detection scanners; check electrical wiring for fraying and loose connections on oil burner; check for proper water temperature setting and adjust if required; clean fire boxes; check for proper draft adjustment; adjust draft meter if necessary for oil burners; check gas pressure regulators by using a water column pressure gauge; check the condition of flue pipes, dampers, and chimneys; and drain and flush tanks (average 75 gallons).

5.3.3.2 Cyclic Maintenance

The Contractor shall perform cyclic maintenance services on each family housing unit three times a year to ensure that the units are maintained properly. Before starting the work, the Contractor shall check with resident about repairs that are needed.

5.3.3.2.1 Documentation and Forms. The Contractor shall document the following information for all family housing units and maintain these forms for one year. The Contractor shall provide the COR with one copy of each completed quarters check list.

- a. Quarters number
- b. Resident's name, signature, and phone number
- c. Cyclic Maintenance start date
- d. Cyclic Maintenance completion date
- e. Labor hours
- f. List of items that were repaired or replaced, the quantity, the date work was completed, and the worker who completed the task.

5.3.3.2.2 Included Tasks. Cyclic maintenance and repair tasks include, but are not limited to, the following:

- a. Windows and Screens. The Contractor shall ensure that all windows are operational. The Contractor shall perform repairs and maintenance to panes, sashes, sash cords, shades, locks, glazing, and holes in screens.
- b. Doors. The Contractor shall perform repairs and maintenance to hardware, weather-stripping, panes, glazing, thresholds, locks, closet door tracks, and door closures.
- c. Floors, Walls, and Ceilings. The Contractor shall perform minor repairs to vinyl, carpet, wood, and tiled floors. The Contractor shall repair, patch and paint, as required, all interior walls and ceilings.
- d. Lights and Outlets. The Contractor shall ensure the operation of all interior and exterior lights and outlets. The Contractor shall perform repairs to light fixtures, switches and outlet covers.
- e. Commodes, Sinks, and Tubs/Showers. The Contractor shall perform repairs and replacements to damaged hardware, seats and covers on commodes, washers, stoppers, shower heads, and tiles. The Contractor shall recaulk, as required, sinks and tubs/showers. The Contractor shall ensure the operation of all commodes, sinks, and tubs/showers.
- f. Cabinets and Drawers. The Contractor shall perform repairs to hardware, doors, and sides of all cabinets and drawers.
- g. Stairs and Molding. The Contractor shall perform repairs to treads, railings, and steps. The Contractor shall perform repairs to baseboard, chair, and ceiling molding.
- h. Smoke, Carbon Monoxide, and Heat Detectors. The Contractor shall ensure that each detector is operational. The Contractor shall depress the detector test button to ensure that it works. If the detector does not respond to the test button, the Contractor shall replace the detector with a new, fully operational detector.

- i. Roofs. The Contractor shall accomplish maintenance work that preserves roof integrity and watertightness. The Contractor's inspection shall include investigation of leaks, general condition of the membrane, deck, and roofing structural members, and all items that penetrate the membrane, whether from above or below. Should this inspection reveal damage caused by wood destroying insects, the Contractor shall report this condition to the COR. The Contractor shall initiate action to treat or exterminate the infestation in accordance with Functional Area 5.9. When conditions suggesting advanced deterioration are found that require major repair or replacement, the Contractor shall report this condition to the COR.
- j. Debris Removal. The Contractor shall remove all leaves, organic material, and other debris from gutters, downspouts, and drains. The Contractor shall ensure that drainage devices direct water away from unit foundations in order to inhibit erosion.

5.3.3.2.3 Other Equipment. The Contractor shall perform inspection and maintenance to ensure that Government-installed equipment retains approximately its original design capacity and operating condition. The Contractor shall perform this work on the following items:

- a. Exhaust fans
- b. Door bells
- c. Garbage disposals
- d. Range hoods
- e. Ceiling fans
- f. Electric garage door openers
- g. A/C units
- h. Dishwashers
- i. Refrigerators/ice makers
- j. Freezers
- k. Ovens and ranges
- l. Circulating pumps
- m. Humidifiers

5.3.4 UNSCHEDULED TASKS

Unscheduled tasks shall be identified based upon inspections conducted by the Government and Contractor pursuant to change of occupancy maintenance, preventive maintenance, and cyclic maintenance, and by COR request. Unscheduled task work will also be generated by residents submitting requests to the Service Order Desk. The Contractor shall perform the unscheduled tasks described below when initiated through either a Service Order (SO) or an Individual Job Order (IJO).

5.3.4.1 Change of Occupancy Maintenance

The Contractor shall inspect and repair interior and exterior components of family housing units during change of occupancy to ensure a safe and habitable environment for new residents. The Government family housing Agent will identify and initiate requests for repairs via Service Orders during change of occupancy maintenance.

5.3.4.1.1 Change of Occupancy Documentation. The Contractor shall document each change of occupancy maintenance activity performed. The Contractor shall document the following information the same working day that the change of occupancy maintenance is performed:

- Building, quarter, structure, or facility number
- Standard hours
- Date Change of Occupancy Maintenance performed
- Change of Occupancy Maintenance performed
- Time In / Time Out and Total Hours on Change of Occupancy Maintenance
- Unit Leader
- Description of work performed

5.3.4.1.2 Maintenance Tasks. During the Pre-termination Inspection, a Government Family Housing Agent will determine the preliminary change of occupancy maintenance requirements and provide a copy to the Contractor to begin scheduling maintenance and staging material. The Family Housing Agent will perform a final inspection of the work completed and provide the Contractor with a final checklist of maintenance items to be corrected. The Contractor shall be responsible for identifying and repairing other items of work not noticed or identified by the Family Housing Agent and shall make a note on the checklist. Change of occupancy maintenance tasks include, but are not limited to, the following tasks.

5.3.4.1.2.1 Pest Control. The Contractor shall survey for visible signs of pest infestations in both exterior and interior locations of the housing unit. The Contractor shall treat for pests in accordance with Functional Area 5.9.

5.3.4.1.2.2 Exterior Maintenance. The Contractor shall ensure that the exteriors of all family housing units, carports, garages, storage sheds, and other associated buildings are safe and present an aesthetically pleasing appearance. The Contractor shall remove all debris from roofs, gutters, and downspouts of each unit.

5.3.4.1.2.3 Interior Maintenance. The Contractor shall ensure that all commodes, toilets, faucets, showers, tubs, and wash basins are operational and safe. The Contractor shall repair or replace any deteriorated or unserviceable items and its components. All damaged, deteriorated, cracked, stained, or unserviceable kitchen sinks shall be restored to a serviceable condition or replaced. Replacement sinks shall be stainless steel.

5.3.4.1.2.4 Painting Interior and Exterior. The Contractor shall spot paint family housing units as part of the change of occupancy maintenance. All work shall be

in accordance with the practices of the trade, leaving the finished surface evenly coated, free from drops, ridges, waves, laps, brush marks, runs, and other defects. The Contractor is solely responsible for proper coverage and the results of its work. Painted surfaces shall be uniform in color and texture. Upon completion of the work, staging, scaffolding, and containers shall be removed from the site. Paint spots, oil, and stains on adjacent floors, surfaces, and other areas not painted shall be removed, and the entire work area shall be left clean.

5.3.4.1.2.5 Telephone Lines. The Contractor shall ensure that two working, properly installed telephone lines are in place for each unit; one in the kitchen and one in the master bedroom. The Contractor is responsible for all the telephone wiring from the terminal box throughout the quarters. For the General Flag Officers Quarters, the Contractor shall maintain and repair all telephone lines located throughout the unit.

5.3.4.1.2.6 Gas Line Maintenance and Repair. The Contractor shall inspect, maintain, replace, test, and repair all interior and exterior gas lines, regulators, meters, valves, valve boxes, and main distribution system cut-off valves. The Contractor shall perform inspection of all gas lines, meter sets, and fittings for leaks, valve condition, operation of pressure-reducing stations, valves, and evidence of pipe corrosion. Regulators shall be checked to ensure they are open and that the vent outlet is protected by a screen. The condensate drains shall be bled and checked for leaks. Defective valves and valve boxes shall be repaired or replaced upon detection. Gas leaks shall be repaired immediately upon detection or during an emergency response call. When leak repairs require turning off a gas service, the Contractor shall re-light all affected pilot lights following the repair.

5.3.4.1.2.7 Hot Water Heaters. The Contractor shall inspect, maintain, repair, and install all hot water heaters and components including, but not limited to, storage tanks, water pumps, and controls for commercial, domestic, and industrial usage. The Contractor shall check all thermostats and set domestic use temperature no higher than 115° F. The Contractor shall ensure that all hot water heater thermostats are in proper working condition.

- a. Gas Lines. The Contractor shall perform a visual inspection of water heater gas lines and repair those that are crimped or appear to be damaged. The Contractor shall test all water heater and furnace gas lines for leaks using the approved methods and make all necessary repairs immediately upon detection.
- b. Heating Apparatus. The Contractor shall inspect and repair or replace heating elements, burners, flues, thermostats, pressure relief valves, drain plugs, all electrical connections and junction boxes, flame arrestors, gas valves, and pilot lights.
- c. Tanks. The Contractor shall inspect hot water heater tanks and replace any that show signs of deterioration or leakage. New hot water heaters shall be comparable in type (gas, electric, or steam) and size to their predecessors.

5.3.4.1.3 Completion Time. All change of occupancy maintenance work shall be completed within five working days after the unit becomes available for work by the Contractor. The unit becomes available when it is turned over to the Contractor by the Government for change of occupancy maintenance work.

5.3.4.1.4 Cleanliness. The Contractor is required to return the unit to the Government free of any dirt, dust, grease, smudge marks, and garbage accumulated from the Contractor's work.

5.3.4.2 Exterior Structure and Surfaces

5.3.4.2.1 Exterior Walls. The Contractor shall restore damaged or deteriorated wall areas to a serviceable and weathertight condition. Repairs shall match the undamaged portion of the walls in material, color, size, and texture.

5.3.4.2.1.1 Joints. The Contractor shall caulk joints in exterior walls in order to form a weathertight seal.

5.3.4.2.1.2 Exterior Trim. The Contractor shall replace damaged, missing, or deteriorated trim, including bird screens, with new material of a design to match existing trim.

5.3.4.2.1.3 Hose Bibs. The Contractor shall check for and repair or replace leaking faucets, broken handles, and other defects. The Contractor shall check slabs in the vicinity of hose bibs for evidence of leakage inside the wall. The Contractor shall repair or replace bug proof seal when installed. The Contractor shall ensure that all hose bibs have a backflow device.

5.3.4.2.2 Roofing and Accessories. The Contractor shall repair and maintain roofs to preserve a weathertight seal.

5.3.4.2.2.1 Roof Flashing and Drip Edges. Roof flashing and drip edges shall be replaced or repaired to provide an effective water seal. The Contractor shall ensure that repairs prevent corrosion and erosion.

5.3.4.2.2.2 Gravel Stops. Gravel stops shall be repaired or replaced as necessary to fulfill intended use.

5.3.4.2.2.3 Gutters, Downspouts, and Drains. Gutters, downspouts, and drains shall be maintained in a condition to carry water away from the building to prevent erosion damage. Damaged or deteriorated gutters and downspouts shall be sectioned and replaced to match the existing material. The Contractor shall remove debris from gutters and downspouts. The Contractor shall replace missing gutters, downspouts, and drains with materials of the same type and quality. Splash blocks shall be installed or replaced as required. Loose components shall be firmly re-attached. The Contractor shall ensure that repairs prevent corrosion and erosion.

5.3.4.3 Exterior Accessories and Storage Structures

5.3.4.3.1 Garages, Carports, Bus Stop Shelters, and Exterior Storage Structures. The Contractor shall repair or replace damaged, missing, defective, or deteriorated portions of exterior garages, carports, bus stop shelters, and exterior storage structures to ensure that they are in a safe and usable condition. Damaged or deteriorated exterior floors, slabs, and walls shall be repaired. Loose items shall be secured.

5.3.4.3.1.1 Garage Doors. The Contractor shall maintain, repair, and replace garage doors, jambs, and associated hardware. This includes, but is not limited to, installation, repair, and replacement of locks, stops, rollers, and tracks.

5.3.4.3.1.2 Garage and Carport Floors and Concrete Patios. The Contractor shall maintain and repair concrete garage and carport floors and patios. The work shall include repairing eroded areas, sealing cracks and chips, and replacing broken or deteriorated areas.

5.3.4.3.2 Steps, Landings, Railings, and Posts. The Contractor shall repair or replace steps, landings, railings, and posts to ensure a safe and structurally sound condition.

5.3.4.3.3 Drying Cloth Umbrellas. The Contractor shall install a PVC pipe sleeve in concrete mounded 1/2" above existing ground level to hold and support drying cloth umbrellas.

5.3.4.3.4 House Numbers. The Contractor shall replace missing, deteriorated, or damaged house numbers. Replacement numbers shall be of the same size, color, and style as the existing numbers.

5.3.4.3.5 Splash Blocks. The Contractor shall replace broken or missing splash blocks with like material and position them to drain water away from the foundation. Existing splash blocks shall be repositioned as necessary to ensure that water drains away from the foundation.

5.3.4.3.6 Fencing (Wood, Metal, or Vinyl). The Contractor shall replace or repair damaged, missing, or deteriorated fencing with new material matching the original. The Contractor shall paint or stain materials as required to match the existing color.

5.3.4.3.7 Doors and Storm Screen Doors. The Contractor shall maintain, repair, paint, and replace exterior doors, door jambs, and associated hardware. This includes, but is not limited to, repair or replacement of holes, locks, thresholds, door sweeps, hinges, and screening.

5.3.4.3.8 Porches, Florida Rooms, Decks, Patio Covers, and Screened Porches. The Contractor shall replace wooden and other structural material that shows evidence of rot or deterioration. After work is complete, the Contractor shall paint new material to match undamaged material or original construction. The Contractor shall repair or replace screening, doors, windows, hardware, and locks as required.

5.3.4.4 Interior Structure and Surfaces

5.3.4.4.1 Walls and Ceilings. The Contractor shall repair and replace damaged and deteriorated walls, ceilings, and trim to provide a safe, attractive interior that is free of defects. The Contractor shall fill all holes, spackle, repair wall texturing, and paint to match existing color as required.

5.3.4.4.2 Floors. The Contractor shall repair or replace damaged or deteriorated flooring and subflooring to provide a safe, uniform, aesthetic surface. All structural damage or deterioration shall be repaired. Termite damage found during the course of floor repairs shall be reported to the COR. The Contractor shall continue with repairs after an extermination has been completed.

- 5.3.4.4.2.1 Vinyl Tile Flooring and Seamless Vinyl. The Contractor shall replace vinyl tile and seamless vinyl floor covering as necessary. The Contractor shall remove base, shoe molding, and any other items required to facilitate replacement of floor covering. The Contractor shall replace all such removed items upon completion of floor work. The Contractor shall prepare subflooring appropriately. The Contractor shall install vinyl tile and sheet vinyl in accordance with manufacturer's specifications. All cuts and joints shall be tight, free of bubbles and creases, and with patterns matching.
- 5.3.4.4.2.2 Ceramic Wall and Floor Tile. The Contractor shall repair or replace damaged ceramic floors and walls. New tile shall match existing tile and shall be replaced in accordance with manufacturer's written instructions. The Contractor shall use adhesive recommended by the tile manufacturer. Floors and walls shall be properly prepared before tile is installed. All joints shall be grouted and sealed. All residue shall be removed and tile cleaned.
- 5.3.4.4.2.3 Wood Floors. The Contractor shall repair hardwood floors (parquet and wood strip) as necessary. The Contractor shall fill all holes, grooves, and other indentations in the floor using a filler recommended by the finish manufacturer. Filled areas shall present a smooth, neat appearance.
- 5.3.4.4.3 Wall and Ceiling Texturing. The Contractor shall properly prepare surfaces to receive texture and prime surfaces when required. Touch up texturing shall match existing surfaces and cover required areas properly. All other wall and ceiling texturing shall match adjoining surfaces and be evenly coated. All texture on surfaces not intended to be textured shall have all texture removed.
- 5.3.4.4.4 Doors, Windows, and Related Hardware (Interior and Exterior). The Contractor shall repair or replace all deteriorated, damaged, missing, or malfunctioning doors, windows, and related hardware in order to ensure a safe, functional, and aesthetically acceptable condition. The Contractor shall ensure that all windows and sliding glass doors are clean after all repairs are complete.
- 5.3.4.4.4.1 Glazing. The Contractor shall glaze using glazing compound, clips, angles, beads, splines, moldings, weather-stripping, and spacer strips. The Contractor shall replace glass in single paned windows and door with the glass of the same thickness.
- 5.3.4.4.4.2 Weather-stripping. Damaged, missing, or deteriorated weather-stripping shall be replaced according to the manufacturer's recommendations. Weather-stripping shall provide a weathertight seal.
- 5.3.4.4.4.3 Door Installation. The Contractor shall install doors in accordance with manufacturer's instructions. The Contractor shall prepare doors to receive finish hardware, such as machine cutting relief for hinges and cores for handsets and cylinders. The Contractor shall adjust the door in order to provide smooth and balanced movement. After installation, Contractor shall stain or paint doors to be consistent with other doors in the unit.
- 5.3.4.4.4.4 Hardware Installation. The Contractor shall install all hardware per manufacturer's instructions. The Contractor shall verify proper installation and function of all hardware, and make required adjustments in order to achieve optimum operation, such as tightening screws and fasteners as necessary. The

Contractor shall make scratches and abrasions invisible to the unaided eye from a distance of five feet, or completely replace items with such damage with identical new items. The Contractor shall re-key to match existing door locks in the unit.

- 5.3.4.4.5 Stairs and Handrail Components. The Contractor shall repair or replace stairs and handrail components as necessary to ensure a safe and structurally sound condition.

5.3.4.5 Interior Building Accessories

- 5.3.4.5.1 Interior Window Treatments. The Contractor shall repair or replace broken or torn shades and vinyl mini blinds to an operating condition. Shades shall be level and parallel with the floor.

- 5.3.4.5.2 Bathroom Fixtures and Accessories. The Contractor shall secure loose bathroom accessories and plumbing fixtures. Damaged or missing items shall be replaced.

- 5.3.4.5.2.1 Metal Components. The Contractor shall replace all missing or corroded metal components with similar or better quality items. Components include, but are not limited to: mechanical drain stoppers, drain screen chrome surfaces, and drain connectors in sinks, basins, and tubs.

- 5.3.4.5.2.2 Medicine Chests and Wall Mirrors. The Contractor shall replace cracked, deteriorated, or broken mirrors. Missing or damaged shelves shall be replaced. Cabinets damaged or rusted beyond repair shall be replaced.

- 5.3.4.5.2.3 Fixtures. Bathroom commodes and lavatories shall be maintained in a safe and functional condition. Missing, damaged, stained, or deteriorated fixtures shall be replaced by the Contractor when such fixtures are not functional or when directed by the COR.

- 5.3.4.5.2.4 Bathtubs and Showers. The Contractor shall maintain bathtub units, shower stalls, shower doors, and tub enclosures in a safe, functional, and watertight condition, and shall repair defective plumbing.

- 5.3.4.5.2.5 Caulking. The Contractor shall completely remove and replace deteriorated caulking with a silicone-based sealant. The sealant shall be applied according to the manufacturer's recommendations. Sealing materials that are marked or stained and cannot otherwise be cleaned shall be replaced. The caulk shall be of a color aesthetically appropriate for the room.

- 5.3.4.5.3 Cabinets. The Contractor shall repair or replace missing, damaged, or deteriorated doors, drawers, and related hardware to ensure a sound, complete, and operable cabinet. Cabinet finishes shall be restored. Countertops and splashbacks shall be repaired to provide a serviceable, watertight surface. The Contractor shall replace countertops when directed by the COR.

- 5.3.4.5.4 Fireplace and Chimneys. The Contractor shall repair cracks, loose bricks, open mortar joints, and loose apron tiles. The Contractor shall maintain and repair fireplace screens, to include replacement of worn or damaged parts.

5.3.4.6 Building Systems and Equipment

5.3.4.6.1 Plumbing Systems. The Contractor shall ensure that plumbing systems and associated components operate in accordance with the Uniform Plumbing Code (UPC). The quality of workmanship shall be equal to the minimum specified by UPC.

5.3.4.6.2 Heating, Ventilating, and Air Conditioning Systems. The Contractor shall perform maintenance and repairs on heating, ventilating, and air conditioning systems. The Contractor shall accomplish maintenance to provide safe, economical, and operable systems that work by design and are free from all defects. These systems shall be maintained according to the standards specified in manufacturer recommendations and all NEC, ASHRAE, OSHA, EPA, NFPA, National Fuel Gas, 92 CFR, 49 CFR, ANSI, and Uniform Plumbing codes. Heating and air conditioning systems shall provide room air temperatures consistent with Government energy conservation guidelines and medical exemption conditions. The Contractor shall ensure that there are no violations of the 1990 Clean Air Act such as refrigerant leaks and improper handling of chlorofluorocarbon (CFC) and hydrofluorocarbons (HFC). The Contractor shall use proper recovery methods and equipment to recover refrigerant from air conditioning systems. The Contractor shall clean or replace, AC units, coils, condensers, drip pans, and drain lines, as necessary.

5.3.4.6.2.1 Pressure/Temperature Readings. Using proper gauges, meters, and analyzers, the Contractor shall record suction and discharge pressures; super heat, suction, and discharge temperatures; subcooling; water flow (GPM); water temperature in and out; water pressure differential; air temperature to indoor coil and air temperature from indoor coil; blower amps; compressor amps; thermostat heat anticipator; and the pressure switch high set. The Contractor shall make repairs as necessary.

5.3.4.6.2.2 Cleaning. The Contractor shall clean blowers (squirrel cages) and both sides of indoor refrigerant coils using a detergent recommended by the manufacturer for the use intended. If the detergent damages paint finishes, the Contractor shall re-touch as required. The Contractor shall clean around air handling units. The Contractor shall clean and flush condensate drain pans and drain lines to ensure that lines and pans are free of restrictions. The Contractor shall clean fan blades and lubricate motors using lubricants recommended by the equipment manufacturer. The Contractor shall clean all grills and registers in the air distribution system, replace those that are found defective or corroded, and adjust dampers as needed to provide a uniform temperature throughout all rooms.

5.3.4.6.2.3 Belts and Insulation. The Contractor shall check belts for wear and tension, and adjust or replace them as required. The Contractor shall check insulation on lines and on inside unit walls. If insulation is missing or deteriorated, the Contractor shall replace it. The Contractor shall check and repair or replace insulation on refrigerant suction lines, air distribution ducts, and fan coil units as required to eliminate sweating.

5.3.4.6.2.4 Leaks. The Contractor shall check drip pans to ensure that there are no leaks. The Contractor shall check for and repair Freon or refrigerant leaks.

5.3.4.6.2.5 Thermostats. The Contractor shall check the performance of room thermostats on both the heating and cooling cycles. The Contractor shall make

adjustments and repairs as performance checks and visual observations indicate a need. The Contractor shall inspect and replace thermostat batteries.

5.3.4.6.2.6 Filters. The Contractor shall clean permanent filters and replace disposable filters as needed on indoor fan coils. The Contractor shall replace damaged or missing permanent filters.

5.3.4.6.2.7 Furnace Cabinets. If cabinet panels are loose, the Contractor shall reinstall them securely. If rust or corrosion is found on the cabinet exterior, the Contractor shall clean (including sanding) and spot paint with a corrosion resistant paint known. If rust or corrosion is found on the interior, the Contractor shall treat interior surfaces of cabinets, including equipment, with a rust proofing material recommend by the manufacturer for the use intended. The rustproofing material shall be a type that does not liberate explosive or odorous vapors.

5.3.4.6.2.8 Air Handling Units. The Contractor shall check the insides of air handling units for insulation on the sides and on the Freon lines. The Contractor shall replace missing insulation by gluing it to the interior surface. Missing or damaged insulation shall be replaced with the same type originally installed.

5.3.4.6.2.9 Other. The Contractor shall make other adjustments and repairs as needed to place all components of the heating and air conditioning system in proper working order.

5.3.4.6.3 Electrical Systems. The Contractor shall maintain and repair electrical systems for individual family housing units. Repair or replacement of electrical components shall be made in such a manner as to ensure a safe and reliable electrical system. All replacement materials and components shall be approved by Underwriters Laboratories (UL). All work shall conform to the requirements of the National Electrical Code (NEC).

5.3.4.6.3.1 Exterior Electrical Components. The Contractor shall service, maintain, and repair exterior electrical components to provide a serviceable, safe system from the buildings to the main distribution panel. The Contractor shall maintain and repair all exterior electrical components as originally designed. This includes to the house side of the meter set (on underground service).

5.3.4.6.3.2 Exterior Lighting. The Contractor shall maintain, repair, and replace exterior lighting, to include electrical light fixtures mounted on units and located in yards. Work shall include touch-up painting of any rusted or deteriorated areas. Paint shall match existing color.

5.3.4.6.4 Gas Systems. The Contractor shall ensure that the gas system in each unit is in a safe and efficient operating condition. The Contractor shall test and repair all interior gas lines, fittings, and valves.

5.3.4.7 General Flag Officer's Quarters (GFOQ) Change of Occupancy

The Contractor shall perform change of occupancy maintenance on GFOQ to ensure a safe and habitable environment for the resident. The Contractor shall ensure that labor hours, supply cost, equipment cost and material cost have been entered into the Government Information System. The Contractor shall perform all repairs on an approved Service Order (SO).

5.3.4.7.1 Government Inspection. The Contractor shall provide a technician to accompany the Government Quarters Agent at the pre-termination inspection and final clearance inspection of the GFOQ to identify work required and estimated repair time required.

5.3.4.7.2 Work Authorization. The Contractor shall obtain an authorization form from the COR on all work to be performed in these quarters. Completed copies of all work documents shall be provided to the COR within three work days after completion.

5.3.4.7.3 Special Requirements. The GFOQ change of occupancy may require additional work to be performed. The Contractor shall perform all tasks under the ordinary change of occupancy Maintenance and other requested tasks.

5.3.4.8 Appliances (Government-Owned)

The Contractor shall perform work on Government-Owned appliances in housing quarters in order to restore defective appliances to the operating condition specified by the appliance manufacturer. Repair quality shall be equivalent to the original equipment's quality in terms of parts, materials, and workmanship. Replacement parts shall conform to the appliance manufacturer's design requirements, and shall provide reliability and durability comparable to the original equipment. When replacements are required, the Contractor shall transport the appliance to the dwelling unit. Replacement appliances shall be installed, tested, and made operational prior to releasing them to the resident. This work includes, but is not limited to, modifying utilities and facilities to fit the new appliances, connecting the appliance, and placing the appliance in its final position. The Contractor is responsible for the removal of old appliances.

5.3.4.9 Miscellaneous Housing Area Maintenance and Repair

5.3.4.9.1 Sidewalks or Concrete Walkways. The Contractor shall maintain and repair sidewalks; concrete walkways from the main sidewalk, street, or parking area to the unit; and concrete steps. The Contractor shall replace broken, cracked, sunken, or raised sidewalks.

5.3.4.9.2 Maintenance and Repair of Driveways. The Contractor shall maintain and repair driveways from the street to garage or carport units. Work shall include repairing eroded areas around and under driveways or carport, sealing cracks and chips, and replacing broken or deteriorated areas.

5.3.4.9.3 Playground and Tot Lot Equipment. The Contractor shall repair or replace damaged, missing, or deteriorated components of playground and tot lot equipment to ensure a safe and usable condition. Replacements shall match the original appearance in markings and coloration.

5.3.4.9.4 Keys and Locks. The Contractor shall duplicate and make keys, and provide lock and key service, including the re-tumbling of locks. The quality of service shall be comparable to that provided by commercial locksmiths.

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